

REMARKS

Claims 21-39 are pending in the application, and are rejected. Claims 21, 25 and 28 are herein amended. Claims 37-39 are herein canceled. No new matter has been entered.

Objections to the Specification

The Examiner asserts that the paragraph starting on page 21, line 6 should be amended to recite “Figure 8” rather than “Figure 3”. Applicants herein amend the specification.

Claim 28 is objected to because claim 28 repeats claim 26. Applicants note that claim 28 was inadvertently submitted as depending on claim 25 instead of the appropriate claim 27. Applicants herein include this amendment.

Claim Rejections - 35 U.S.C. §112, first paragraph

The Examiner rejects claims 37-39 under 35 U.S.C. §112 as failing to comply with the written description requirement, and asserts that the constant “A” of Figure 4 “appears to be closer to $-2 \mu\text{m}/\%$ rather than $-1 \mu\text{m}/\%$ as claimed.”

Applicants respectfully disagree with this rejection. The Examiner refers to a point in which “ $L_w = 0$ ”. However, because the graph does not exhibit a point in which $L_w = 0$, Applicants submit that the Examiner has misread the Y-axis values when computing his solution of the graph of Fig. 4.

Applicants note that the graph of Fig. 4 shows the equation $L_w = A \cdot \epsilon W + L$. First, Applicants note that the slope of the graph can easily be eyeballed at about -1.0. Further, at ϵW

= 0, the equation becomes $L_w = L$, so $L = 1.3$. This value of 1.3 is confirmed in the specification on page 11, line 12. Using this value for L, at $L_w = 1$, the equation is $1 = A \cdot 0.3 + 1.3$, $A = (1 - 1.3)/0.3 = -1.0$. Applicants traverse this rejection.

The Examiner asserts that claims 38 and 39 recite values that do not have exact antecedent basis in the original disclosure and therefore are considered new matter.

With respect to claim 38, Applicants disagree with the rejection. Applicants note that the specification on page 20, lines 27 et seq. describes an embodiment of Figure 8, in which the optical absorption layer 3a is formed to have a thickness of 50 nm, and the strain-compensating layer 3b is formed to have a thickness of 16.7 nm or more. The paragraph further indicates that the number of repetition of the layers 3a and 3b is reduced to about 20. The thickness of 20 layers wherein each layer includes an optical absorption layer of 50 nm and a strain-compensating layer of 16 nm is exactly 1.334 μm .

Applicants herein cancel claim 39, thus mooted the rejection.

Claim Rejections – 35 U.S.C. §102(e)

Claims 21-36 are rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under U.S.C. §103(a) as obvious over U.S. Patent No. 6,222,200 to Svilans.

The Examiner asserts that Applicants' argument filed January 5, 2005 that the structure of Svilans cannot meet the recited formula of claim 21 is unconvincing. The Examiner asserts that constant L is not particularly defined in the claim and therefore any value can be assigned to L and with the layer thicknesses and strain relationships of Svilans' structures the recited formula

can be applied to Sivilans. The compressive strain of Sivilans is also 0.25% in one embodiment and Lw is 1200 nm, as noted in column 4 of Sivilans. The Examiner asserts that the problem of crystal surface morphology is also addressed by Sivilans as misfit dislocations and defects are to be avoided.

Applicants agree only with the Examiner's statement that Sivilans teaches that crystal surface defects are to be avoided. Specifically, Sivilans teaches that to preclude formation of crystalline defects, e.g. misfit dislocations, the thickness of each layer is limited so that a product of strain by thickness of the layer would not exceed about 20% nm (column 3, line 12 et seq.).

Applicants note that the fact that the cited reference merely recognizes that surface morphology is important is insufficient to anticipate all the claims of the present invention. However, if discrete values for A and L may be selected that meet the values of Sivilans, then the claim is anticipated. The Examiner has asserted that such values exist. The Applicants have asserted that such values would be impossible in Sivilans.

Applicants herein amend claim 21 to specify the value of A as $-1 \mu\text{m}/\%$. Thereafter, Applicants submit that Sivilans does not and can not satisfy the relationship in claim 21 for any value of L. Applicants submit that claim 21, as presently amended and now reciting the previously submitted feature of claims 37 and 38, is not anticipated from Sivilans. Further, there would have been no suggestion or motivation for a person skilled in the art to have derived the subject matter of amended claim 21 from the reference Sivilans.

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Group Art Unit: 2815

Response under 37 C.F.R. §1.111
Attorney Docket No. 010726

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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